

SECTION 02930

SEEDING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Location of work:
 - 1. Establish grass on areas within limits of grading, as indicated, which are not occupied by other planting or construction.
 - 2. Seed disturbed areas outside limits of construction.

1.2 QUALITY ASSURANCE

- A. Minimum standards: U.S. Department of Agriculture (USDA), Federal Seed Act (53 Stat.1275) Rules and Regulations, as amended to date.

1.3 SUBMITTALS

- A. Project information:
 - 1. Prior to delivery of materials, submit certificates certifying that materials meet requirements specified.
 - 2. Submit certified copies of reports for following materials:
 - a. Seed indicating mixture percentage, botanical and common name(s), percentage by weight, and percentages of purity, germination and weed seed.
 - b. Seed labeled in accordance with Federal Seed Act and equalling or exceeding specification requirements.
 - c. Fertilizer indicating chemical analysis.
 - 3. Copies of invoices for fertilizer, indicating grade furnished, to determine total quantity applied.
- B. Contract closeout information:
 - 1. Warranty.
 - 2. Maintenance data.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver seed in standard sealed containers labeled with producer's name and seed analysis, and in accord with US Department of Agriculture Rules and Regulations under Federal Seed Act.
- B. Deliver fertilizer to site in original, unopened containers labeled with manufacturer's chemical analysis.

1.5 JOB CONDITIONS

- A. Perform seeding when conditions and planting season are suitable for successful results generally between March 1 and September 1.
- B. Actual dates for seeding will vary depending on construction schedule and pending weather conditions. Notify Government of anticipated dates for doing work at least 30 days in advance.

1.6 WARRANTY

- A. Warrant seeded areas for 1 year from Substantial Completion.
- B. Replacement materials and methods identical to original.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Establish a smooth, healthy, uniform, close stand of grass from specified seed.
- B. Grass seed:
 - 1. State certified or State approved seed. Fresh, clean, new crop seed.
 - 2. Species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified.
 - 3. Grass seed mixture:

<u>Common and Botanical Name</u>	<u>Percent by Weight</u>	<u>Minimum percent Germ</u>	<u>Minimum percent Purity</u>
Bermuda (cynodon dactylon)	100 percent	90	90

- C. Mulch:
 - 1. Clean, weed free, threshed straw of oats, wheat, barley, rye, beans, peanuts, rice or other locally available mulch material.
 - 2. Do not use mulch containing a quantity of matured noxious weed seeds or other species that will be detrimental to seeding, or provide a menace to surrounding land.
 - 3. Do not use mulch material which is fresh or excessively brittle, or which is decomposed and will smother or retard growth of grass.
 - 4. Anchor mulch to soil by disking.
- D. Fertilizer:
 - 1. Commercial fertilizer of 18-46-0 analysis, meeting applicable requirements of State and Federal Law.
 - 2. Do not use cyanamic compounds or hydrated lime.
- E. Water for planting purposes:
 - 1. Supplied by Government.
 - 2. Provide equipment necessary to transport water from source to required locations.
 - 3. Do not waste water.

PART 3 - EXECUTION

3.1 SOIL PREPARATION

- A. Limit preparation to areas which will be planted soon after preparation.
- B. Prior to applying fertilizer, loosen areas to be seeded to minimum depth of 4 IN with double disc or other suitable device if soil has become hard or compacted.
- C. Remove stones over 1 IN in any dimension, sticks, roots, rubbish and other extraneous matter.
- D. Correct surface irregularities in order to prevent pocket or low areas which will allow water to stand.
- E. Grade areas to be seeded to smooth, even surface with loose, uniformly fine texture.
 - 1. Roll and rake, remove ridges and fill depressions, as required to meet finished grades.
 - 2. Fine grade just prior to planting.
- F. Distribute fertilizer uniformly over areas to be seeded at rate of 8 LB/1000 SF.
 - 1. Use suitable distributor.
 - 2. Incorporate fertilizer into soil to depth of at least 2 IN.

- G. Restore areas to be seeded to specified condition if eroded or otherwise disturbed between finished grading and planting.
- H. If fertilizer application rate is determined, by invoices submitted, to be less than that specified, apply additional fertilizer.

3.2 SEEDING BY DRILLING OR BROADCAST

- A. Do not use seed which is wet, moldy or otherwise damaged.
- B. Use approved mechanical power driven drills or seeders, or mechanical hand seeders, or other approved equipment.
- C. Distribute seed evenly over entire area at not less than 4 LB/1000 SF, 50 percent sown in one direction, remainder at right angles to first sowing.
- D. Stop seeding when work extends beyond most favorable planting season or when satisfactory results cannot be obtained because of drought, high winds excessive moisture, or other factors.
 - 1. Resume work only when favorable condition develops.
- E. Lightly rake seed into soil to depth of 1/4 IN followed by light rolling or cultipacking.
- F. Immediately protect seeded areas against erosion by mulching.
 - 1. Spread mulch in a continuous blanket using 1-1/2 TON/ACRE to depth of 4 or 5 straws.
 - 2. Disk anchoring:
 - a. Anchor mulch by punching it into soil to depth of 2 to 3 IN by using a disk, clodbuster, or other approved equipment.

3.3 MAINTENANCE

- A. Maintain seeded areas for 90 days after seeding.
 - 1. Water, fertilize, weed, mow, trim, roll, regrade, reseed as required.
 - 2. Establish a smooth, healthy, uniform, close stand, free of eroded or bare areas, weeds and surface irregularities.
- B. Provide and maintain temporary piping, hoses and watering equipment as required to keep seeded areas uniformly moist for proper growth.
 - 1. Lay out temporary watering system and arrange watering schedule to avoid walking over muddy and newly seeded areas.
 - 2. Prevent puddling and water erosion and displacement of seed and/or mulch.
- C. Mow seeded areas as soon as there is enough top growth to cut with mower set at recommended height for principal species and before height exceeds 3 IN.
 - 1. Repeat mowing as required to maintain height.
 - 2. Do not delay mowing until grass blades bend over and become matted.
 - 3. Do not mow when grass is wet.
 - 4. Time initial and subsequent mowings as required to maintain height of 1-1/2 to 2 IN.
 - 5. Do not mow lower than 1-1/2 IN.
 - 6. Remove no more than one-half grass leaf surface at any time.
- D. Remulch with new mulch in areas where mulch has been disturbed by wind or maintenance operations sufficiently to nullify its purpose.
- E. Anchor as required to prevent displacement.
- F. Replant bare areas using same materials specified.

END OF SECTION